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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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06/08/2000

David Jau Young Lee

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11/24/2004

GATES & COOPER LLP
HOWARD HUGHES CENTER
6701 CENTER DRIVE WEST, SUITE 1050
LOS ANGELES, CA 90045

EXAMINER

RYMAN, DANIEL J

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/589,974	LEE ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/14/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5, 6, and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnes et al. (USPN 6,711,147).
4. Regarding claims 1 and 12, Barnes discloses an internet protocol-based cellular telephone communications system, comprising: a device (GSN/HA: ref. 254) (Fig. 4 and col. 7, lines 38-49); a foreign agent (FA) (ref. 258, 272, and 284), coupled to the device (Fig. 4) where "coupled" includes both direct and indirect connections; a base transceiver station (BTS) (ref. 16), coupled to the device, for communicating with a mobile telephone (ref. 12) within a transmission area associated with the base transceiver station, wherein the device communicates with the BTS using a cellular network interface (Fig. 4 and col. 7, lines 16-29); and a home agent (HA) (ref. 254 and 270), coupled to the device, wherein the home agent communicates with the device and the foreign agent for registering mobile telephones and transmitting messages using an internet-protocol network separate from the cellular network (Fig. 4 and col. 7, lines 38-63) where a home agent, as broadly defined, is "coupled" to the GSN/HA since the GSN/HA

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comprises a HA and where the GSN/HA is also coupled to a HA (ref. 270) in the mobile network; wherein messages are transmitted using the internet protocol network between the home agent and the device, and messages are transmitted using the cellular network interface between the device and the base transceiver station (Fig. 4 and col. 7, lines 38-63) where the GSN/HA communicates with the mobile IP network using IP and the GPRS network using the cellular network.

Barnes does not expressly disclose in the primary embodiment that the device is a router. Barnes does disclose, as prior art, that the HA and FA are routers (col. 3, lines 34-37 and col. 3, lines 58-61). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the device be a router since the device contains the functionality of an HA and FA, which are routers.

5. Regarding claim 2, referring to claim 1, Barnes discloses a second BTS, wherein a handoff between the BTS and the second BTS is performed through the internet protocol network (Fig. 4 and col. 14, lines 4-31, esp. col. 14, lines 20-24).

6. Regarding claim 5, referring to claim 1, Barnes discloses that the HA directs a message to the mobile telephone using an internet protocol address (col. 3, lines 5-19 and col. 8, lines 47-62).

7. Regarding claim 6, Barnes discloses an internet protocol-based cellular telephone communications system, comprising: a device (GSN/HA: ref. 254) (Fig. 4 and col. 7, lines 38-49), a base transceiver station (BTS) (ref. 16), coupled to the device, for communicating with a mobile telephone (ref. 12) within a transmission area associated with the base transceiver station, wherein the device communicates with the BTS using a cellular network interface (Fig. 4 and

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col. 7, lines 16-29); and a home agent (HA) (ref. 254 and 270), coupled to the device, wherein the home agent communicates with the device for transmitting messages using an internet-protocol network separate from the cellular network (Fig. 4 and col. 7, lines 38-63) where a home agent, as broadly defined, is "coupled" to the GSN/HA since the GSN/HA comprises a HA and where the GSN/HA is also coupled to a HA (ref. 270) in the mobile network; wherein messages are transmitted using the internet protocol network between the home agent and the device, and messages are transmitted using the cellular network interface between the device and the base transceiver station (Fig. 4 and col. 7, lines 38-63) where the GSN/HA communicates with the mobile IP network using IP and the GPRS network using the cellular network.

Barnes does not expressly disclose in the primary embodiment that the device is a "handoff server." Barnes does disclose that the GSN/HA and GSN/FA are instrumental in performing handoff since the GSN/HA and GSN/FA perform the signaling required to complete handoff (col. 10, lines 26-49 and col. 14, lines 4-47). Thus, as broadly defined, the GSN/HA and the GSN/FA can be characterized as "handoff servers." It would have been obvious to one of ordinary skill in the art at the time of the invention that the devices are "handoff servers" since the devices are instrumental in performing handoff.

8. Regarding claim 9, referring to claim 6, Barnes discloses that a handoff of a mobile telephone between the BTS and a second BTS within the cellular telephone communications system is handled through the handoff server (col. 10, lines 26-49 and col. 14, lines 4-47).

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9. Regarding claim 10, referring to claim 9, Barnes discloses that the mobile telephone communicates directly through the handoff server during the handoff between the BTS and the second BTS (Fig. 4 and col. 10, lines 26-49 and col. 14, lines 4-47).

10. Regarding claim 11, referring to claim 6, Barnes discloses that a handoff between the BTS and a second BTS is anchored through the first BTS until updates can be made at the HA (col. 13, lines 30-64 and col. 14, lines 48-53).

11. Claims 3, 4, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnes et al. (USPN 6,711,147) as applied to claim 1 above, and further in view of Olkkonen (WO 98/43456).

12. Regarding claims 3 and 7, referring to claims 2 and 6, Barnes does not expressly disclose that a soft hand off (SHO) is performed between the BTS and the second BTS. Examiner takes official notice that soft hand offs are very old and well known in the art since soft hand offs reduce the probability that a connection will be dropped during hand off. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the hand off be a soft hand off in order to decrease the probability that a connection will be dropped during hand off.

Barnes does not expressly disclose using asynchronous transfer mode (ATM) communications between the router and the BTS and the router and the second BTS; however, Barnes does disclose that the system can use a variety of communication methods (col. 15, lines 1-17). Olkkonen teaches, in a mobile communication system, using ATM to communicate within mobile network transmission systems in order to increase capacity and flexibility (pg. 2, lines 24- page 3, line 6; page 4, line 19-page 5, line 17; page 8, lines 33-35; and page 11, line 11-page 12,

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line 33). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use asynchronous transfer mode (ATM) communications between the router and the BTS and the router and the second BTS in order to increase capacity and flexibility.

Regarding claims 4 and 8, referring to claims 3 and 6, Barnes in view of Olkkonen suggests that the SHO is performed using ATM between the BTS and the second BTS and the mobile telephone (Olkkonen: page 11, line 11-page 12, line 33).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bender et al (USPN 6,215,779) see entire document which pertains to a wireless data communication system. Ahopelto et al (USPN 5,970,059) see entire document which pertains to routing packets in a packet radio network. Raychaudhuri et al (USPN 5,684,791) see col. 1, lines 16-58 which pertains to using ATM to communicate between a mobile unit and a BTS. Lim (USPN 6,404,754) see entire document which pertains to connecting cellular networks using IP networks.

14. If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a

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substantial delay by the Office in fulfilling the order for the copy of the provisional application.

Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge does not apply.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

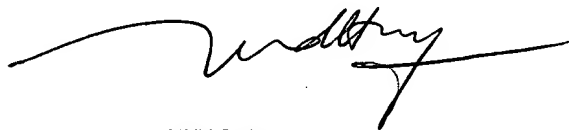
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 Daniel J. Ryman
Examiner
Art Unit 2665



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600